

derived from the DNIS information, and the second portion determined from the PIN (step 38). The teleconferencing bridge may validate the conference I.D. number (step 40), and connect the conferee to a particular conference based on the validated conference I.D. number (step 42). Validation may include comparing the conference I.D. number with a list of stored conference I.D. numbers, as will be discussed in more detail *infra*. If the conference I.D. is found to be invalid (step 40), then an action is taken to prevent the connection of the conferee to the conference (step 44). For example, the conferee may be disconnected or an error message may be played for or displayed to the conferee.

The functions performed by the teleconferencing bridge may include any predetermined map that determines one string of digits from another. For example, the map may be a simple direct map. Thus, if the conferee enters the telephone number 555-1234, the teleconferencing bridge may obtain the first portion of the conference I.D. number to be 1234. Alternatively, the map may be a reversal of the digits. Thus, if the conferee enters the telephone number 555-1234, the teleconferencing bridge may obtain the first portion of the conference I.D. number to be 4321. Furthermore, the function may return a string of digits that is longer or shorter than the string received. The table below contains several examples of possible functions that may be used by the teleconferencing bridge to obtain the first portion of the conference I.D. number. It is to be appreciated that these examples are merely for purposes of illustration and not intended to be limiting. The methods described herein may be implemented using any conceivable map function a user may desire to use.

<u>Conferee enters:</u>	<u>DNIS provides:</u>	<u>First portion of Conference I.D.:</u>	
1-800-555-1234	555-1234	1234	Direct map
1-617-555-1234	555-1234	11223344	More digits created
1-888-555-1234	555-1234	4321	Reversal
1-800-555-1234	555-1234	3475	Function map

Similarly, the function performed by the teleconferencing bridge to generate the second portion of the conference I.D. number from the PIN entered may be any possible map function. The bridge need not perform the same map function on the PIN as was used to determine the first portion of the conference I.D. number.

Since the conference I.D. number is derived from both the DNIS information, and the user entered PIN, by using a large number of DID numbers, which may be obtained from a network service provider, a shorter PIN may be used. The teleconferencing bridge validates the entire conference I.D. number, formed from the DNIS information and the user entered PIN, as though the user had entered the entire string themselves. For example, each conferee may be assigned a four digit PIN, and the teleconferencing bridge may extract four digits from the DNIS information to create an eight digit conference I.D. number. However, the PIN may be any number of digits and the teleconferencing bridge may extract any number of digits from the DNIS information to create the conference I.D. number. The PIN need not have the same number of digits as is extracted from the DNIS information. Nor is the extraction required to be direct. I.e., the teleconferencing bridge may be controlled to map a string of digits received from the DNIS information to another string of digits that are used to form the conference I.D. number. For example, but without limitation to these examples:

<u>Conferee enters:</u>	<u>DNIS info:</u>	<u>PIN entered:</u>	<u>Conference I.D.:</u>	
1-800-555-1234	555-1234	5678	12345678	Direct map
1-800-555-1234	555-1234	345	51234345	Shorter PIN, more digits used from DNIS info
1-800-555-1234	555-1234	5678	15263748	Conf. ID may not be simple concatenation
1-800-555-1234	555-1234	5678	43215678	Reversed DNIS info added to PIN
1-800-555-1234	555-1234	5678	87651234	Reversed PIN added to DNIS info

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Once the conference I.D. number has been derived from the DNIS information and the PIN entered by the conferee, the teleconferencing bridge validates the conference I.D. number to determine whether it is a valid conference I.D. number, and to which conference the conferee should be connected to. The teleconferencing bridge may include a storage element, such as a hard-disk, memory device, tape drive, etc., where it may store a list or database of valid conference I.D. numbers. Validation of the conference I.D. number may include comparing the conference I.D. number received with this list. The teleconferencing bridge may also store information associated with

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- each conference I.D. number and with individual subscribers, such as usage records, billing records, etc., as will be discussed in more detail *infra*. After the conference I.D. number has been validated, and assuming the conference I.D. number is found to be valid, the conferee is connected to the particular conference identified by the conference
- 5 I.D. number. The teleconferencing bridge may continually allocate and re-allocate communication channels and bandwidth to a plurality of conferees as conferences are begun and terminated and conferees are added to an removed from conferences. There may not be a fixed channel assigned to any particular conference. Rather, the bridge may allocate channels and/or bandwidth on a dynamic basis, adjusting to the number of
- 10 conferees connected at any time.

- According to one example, a first PIN may be assigned to a host conferee and a second, different PIN to a group of guest conferees. The teleconferencing bridge may thus distinguish between a host and guests based on the different PINs, which allows the host to be assigned different privileges than the guests in the conference. For example,
- 15 the host may be able to allow guests to join the conference, or to terminate the conference. In another example, the host and guest conferees may call in using different DID numbers, and may be assigned the same or a different PIN. Because the teleconferencing bridge uses both information from the DID number and the PIN to generate the conference I.D. number, either the PIN or the DID number may be used to
- 20 distinguish between a host and guests. For example,

<u>Conferee enters:</u>	<u>DNIS info:</u>	<u>PIN entered:</u>	<u>Conference I.D.:</u>	
1-800-555-1234	555-1234	5678	12345678	= Host
1-800-555-1234	555-1234	8765	12348765	= Guest
1-800-555-4321	555-4321	5678	43215678	= Host
1-800-555-1234	555-1234	5678	12345678	= Guest

- The telephone service provider may also include "charge" information, such as an area, country or toll-free code, with the DNIS information associated with a number.
- 25 The teleconferencing bridge may be programmed to use this information for billing purposes, to differentiate between a local call, a domestic toll free call, or an international toll free call. The teleconferencing bridge may extract billing information,